HP Imaging and Printing Security Center

Help

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1   Introduction

The HP Imaging and Printing Security Center (HP IPSC) is a security compliance tool. Use it to create policies to assess the security of your imaging and printing devices, configure the devices to comply with the policy, and monitor the devices for continued compliance. Using the HP IPSC, you can:

- Easily and quickly create device security policies. Intelligent prompts guide you through the process by providing advice and recommendations as you configure the policy.

- Add device IP addresses or host names:

    ◦ by importing a text or XML file that contains device information

    ◦ by manually entering them

- Assess/remediate devices immediately when they first connect to your network using the HP Device Announcement Agent and allowing automatic remediation.

- Assess/remediate devices manually on demand, or create a schedule to run assessments at preset intervals.

Getting started with the HP Imaging and Printing Security Center

Getting started with the HP IPSC typically involves the following tasks.

Review security policy

Use the **Policies** tab to create a security policy for your network. You can create a new blank policy or use a template, which provides a policy based on industry standard recommendations.

After you create the policy, intelligent prompts guide you through the process of setting the items. Advice and recommendations are provided as you configure the policy.

See Create a security policy on page 16 for instructions.

Add devices

Using the **Devices** tab, you can add devices by importing a text or XML file that contains a list of devices, or by manually entering device information. Use the **Verify** option in the **Devices** tab to verify support for a device (or group of devices). Unsupported devices are indicated in the devices panel.

If you selected the **Accept Device Announcements** check box in the **Instant-On Security** tab (click **File** and then **Settings**), devices are automatically added.

See Add and edit device information on page 21.

Assess devices

Use the policy you created to assess whether the devices comply with your security policy. You can run an assessment from the **Devices** tab, the **Policies** tab, or the **Tasks** tab.

View the assessment results from the **Devices** tab, or by running a report from the **Reports** tab.

> **NOTE:** You can set the HP IPSC to assess only or to assess and remmediate, depending on your needs.

See Assess and remediate on page 27.

Remediate non-compliant devices

Use the policy you created to assess and remediate (correct) a group of devices. You can run an assessment/remediation from the **Devices** tab, the **Policies** tab, or the **Tasks** tab.

View the assessment/remediation results from the **Devices** tab, or by running reports from the **Reports** tab.

See Assess and remediate on page 27.

Review risks and results

Review recommendations and device status using the **Executive Summary** report. Use the **Device** and **Policy Item View** reports to view fleet recommendations and assessed and unassessed devices, and to list your policies.

See Run reports on page 30 for information.

The HP Imaging and Printing Security Center system

The HP IPSC system consists of the following tabs:

- **Home**

  A graphical overview of what is needed to get started with the HP IPSC system. Click an icon to open the HP IPSC Help. The legal disclaimer is also displayed on this page.

- **Policies**

  Lists the security policies that you created.

  NOTE: A built-in policy is provided (HP Best Practices Base Policy), that you can use as a template for creating your own policy.

  Use the policy editor to create, edit, or delete policies.

  - Create policies by clicking **New** and entering a policy name. You can use a blank policy or the HP Best Practices Base Policy as a template. (You **must** use a template to create your policy.) The HP IPSC policy editor provides guidance to help you create an effective policy.

  - When saving a policy, a final validation is initiated. During this process, you can correct any inconsistent or incomplete settings.

    NOTE: You can save an incomplete policy. This is useful when you must complete the policy at a later time. (An incomplete policy is not available for assessment.)

  You can schedule an assessment/remediation by selecting the policy and then associating it to a device group.

- **Devices**

  Lists information about the known devices in your network.

  Displayed information in the main panel includes whether the device is supported, is assigned a license, and device identity information (IP address, hostname, model name, and device name), date assessed, most recent policy name assigned, and compliance recommendations. Icons indicate whether the device passed assessment, and the security risk due to noncompliant configurations if the device fails. In addition, conditions that need attention, such as a disconnected device, unsupported firmware, or credential errors are also shown.

  NOTE: For a list of all available column headings in the **Devices** tab, right-click in the heading area of the device panel and select **Columns**. To change the sort order of a displayed column, click the column heading. You can also change the order by dragging and dropping the column headings.

  The **Devices** panel toolbar contains icons for refreshing the view, device properties, delete a device, add and remove a device from a group, enable and disable filters, add devices, verify the status of the device, and assign a license.

Using the **Devices** tab, you can:

◦ Add devices manually or import a text or XML file containing a list of devices.

◦ Add or remove devices from groups you create. (A group is a collection of devices.) You can then filter the display by any column. For example, you might want to display severe failures by filtering on the risk column. Or display only devices with a credential error using the device status column.

◦ Display the device assessment recommendations and properties.

NOTE: Devices are added automatically when you select the **Accept Device Announcements** check box in the **Instant-On Security** tab of the **Settings** window (click **FIle** and then select **Settings**).

● **Tasks**

View the status of previously completed verifications and assessments/remediations, or create and schedule new assessment/remediation tasks. You can schedule a task to run once, or to repeat as necessary, such as daily, weekly or monthly.

● **Reports**

Run reports to display information about devices, policies, and assessments. The **Reports** tab contains options for refreshing the information, printing, print layout, page setup, and exporting to an Acrobat PDF or Microsoft Word format file.

The following reports are available:

◦ Executive Summary — Reports the current system state, which includes the recommendations and device status.

◦ Devices View (Assessed) — Lists all of the assessed devices. You can generate a more detailed report by selecting individual devices.

◦ Devices View (Recommendations) — Lists all devices that have at least one recommendation sorted by the number of recommendations. You can generate a more detailed report by selecting individual devices.

◦ Devices View (Remediated) — Lists the remediated devices. You can generate a more detailed report by selecting individual devices.

◦ Devices View (Unassessed) — Lists all of the devices that could not be assessed.

◦ Policy Item View (Fleet Assessment Summary) — Summarizes the number of recommendations for a policy item and its risk in a security category. Filtered by the currently selected device group.

◦ Policy Item View (Polices) — Lists all of the current policies. You can generate additional reports by item name or all items.

What you must provide

The following lists the basic requirements for using the HP IPSC:

- A supported Microsoft Windows computer.

  The following Microsoft Windows 32- and 64-bit operating systems (except as noted) are supported:
  - Windows Server 2008
  - Windows Server 2008 R2
  - Windows Server 2012
  - Windows Vista
  - Windows 7
  - Windows 8

- HP IPSC is supported in a VMware environment.

  Requirements: Microsoft Windows Server 2008 SP 1 and above and Windows Server 2008 R2 and above (32- and 64-bit versions) are compatible guest operating systems in VMware's ESX and ESXi versions 4.0 Update 4 and above.

- A supported HP device (printer, MFP, or digital sender).

  For a current list of supported HP devices, go to: www.hp.com/go/ipsc

- The latest HP device firmware version.

  HP recommends that you install the latest firmware version to ensure your devices contain the latest security updates and features. For firmware upgrade instructions, see the setup or use guides provided with the device.

- The latest HP Jetdirect firmware version.

  You must use V.40.xx or later. For firmware upgrade instructions, see the setup or use guides provided with the HP Jetdirect product.

2 Set up the HP Imaging and Printing Security Center

Use the information in this section to set up the HP IPSC.

NOTE: For installation instructions of the HP IPSC see the *HP Imaging and Printing Security Center Installation and Setup Guide*.

- Set the HP Imaging and Printing Security Center server connection option
- Verify global remediation setting
- Install device licensing
- Set up Instant-On Security

Set the HP Imaging and Printing Security Center server connection option

When you first start the HP IPSC, you must provide the DNS name or IP address of the server in the **Connect to Server** window. Whether the HP IPSC prompts for the server name is controlled by an option in **Settings**. Use the following steps to change this option.

1. Start the HP Imaging and Printing Security Center.

2. If prompted, enter the server name in the **Connect to Server** window, and then click **Connect**.

3. Click **File**, and then click **Settings**.

4. On the **General** tab, in the **Connect Options** panel, select the check box for **Show the "Connect to Server" dialog before connecting**, if you want to be prompted. Otherwise, clear the check box if you do not want to be prompted.

   NOTE: If you select the check box to **Show the "Connect to Server" dialog before connecting**, you can avoid being prompted by the **Connect to Server** window each time you start the HP Imaging and Printing Security Center by providing the server name and then selecting the check box **Don't show this dialog again**.

5. Click **OK** to save your changes.

Verify global remediation setting

Before running the first assessment, HP recommends that you verify the global remediation setting, which controls whether an out-of-compliance device is remediated (corrected) during the assessment process. This setting applies to **all** policies and **takes precedence** over an individual policy's advanced remediation settings (**Advanced Policy Settings**). When the HP IPSC is first installed, the default for the global remediation setting is **Enable device remediation (Remediate and Report)**.

> **NOTE:** You can also control how individual out-of-compliance policy items are processed during remediation using the policy's **Advanced Policy Settings**. Options are provided for whether to remediate out of compliance items and how to process unsupported devices. For more information, see Set severity, remediation, and unsupported behavior on page 18.

Use the following steps to set the global remediation option:

1. Start the HP IPSC, click **File**, and then click **Settings**.

2. Click the **General** tab.

3. Select the **Enable device remediation (Remediate and Report)** check box if you want the HP IPSC to remediate out-of-compliance devices.

4. Select the **Disable device remediation (Report Only)** check box if you do **not** want out-of-compliance devices remediated.

   You might want to disable device remediation to prevent accidental changes to devices on your network.

5. Click **OK** to save your entries.

Install device licensing

Before you can assess and remediate any of the printers/MFPs on your network, you must install HP Imaging and Printing Security Center device licenses. (Without a device license, all other actions are available, such as sorting, filtering, and verifying.) A device license is required for each printer/MFP that you plan to assess/remediate. Licenses are typically provided using a license file.

NOTE: Your purchase of the HP Imaging and Printing Security Center should have included device licenses.

Demonstration (trial) licenses are also available. Contact your HP representative for more information.

- Licenses are node locked using the device's MAC address.

- Once licensing is installed, devices are automatically licensed when they are:

    ◦ Manually added by entering the device IP address or hostname

    ◦ Added using a text or XML file (see Add device addresses using a plain text or XML file on page 22)

    ◦ Discovered and added using the **Instant-On Security** feature (see Set up Instant-On Security on page 12)

- If there are insufficient licenses available during an import, the devices are added but not licensed.

    NOTE: To reduce the risk of depleting all of your licenses, ensure you have sufficient quantity before importing.

- To return licenses to the license pool, you must delete the licensed device.

    NOTE: Deleting a licensed device removes that device's historical data.

- You can manually assign licenses to individual devices or groups of devices from the **Devices** tab. To add licenses, select the group or device(s) and then click **License** in the toolbar, or right-click and select **License** from the menu.

Use the following steps to initially install licenses, or to add additional licenses:

1. Save the license file on your system.

2. Start the HP IPSC, click **File**, and then click **Settings**.

3. Click the **Licenses** tab.

4. Click the **Add Licenses Now** button.

    The file browser opens.

5. Browse to the location where you stored the license file, select it, and then click **Open**.

    The license file is read and the display is updated with the available licenses and the expiration information. Once the license file is read, it is no longer needed.

6. If an error is displayed (**No licenses were added**), the following are typical causes:

   ● The HP IPSC is unable to connect to the license server.

   ● Attempting to update a demonstration license. A new demonstration license will not override an existing demonstration license.

   ● Attempting to install a demonstration license file when a normal license is currently installed.

   ● Attempting to install the same license file.

   ● Attempting to install a corrupted or invalid license file.

7. Click **OK** to close.

Set up Instant-On Security

Using the **HP Device Announcement Agent** that is built into the latest firmware of most HP Enterprise printers/MFPs, and the **Instant-On Security** feature in the HP IPSC, you can immediately discover and configure print devices securely when they first connect to your network without intervention.

NOTE: Automatic assessment/remediation of newly discovered devices requires a device license and a valid initial assessment policy.

To implement **Instant-On Security**, the device must use firmware version 11.3 (released December 2011) or later.

For a list of devices that include the **HP Device Announcement Agent**, go to: www.hp.com/go/ipsc

The **Instant-On Security** feature consists of automatic discovery and automatic remediation.

Automatic discovery requires that the device's **Device Announcement Agent** is enabled (it is enabled by default), and that the HP IPSC **Accept Device Announcements** feature is enabled (disabled by default). In addition, your corporate DNS server must be configured with an entry that points the host name **hp-print-mgmt** to the IP address of the HP IPSC server.

When the device announcement agent is activated on a compatible printer/MFP, the HP device announcement agent looks for a host with the DNS host name of **hp-print-mgmt**. If found, the device announces itself directly to the HP IPSC. If **Accept Device Announcements** is enabled and the device passes the minimum authentication requirements, the device is automatically added to the HP IPSC. If **Allow Automatic Remediation** is enabled, automatic assessment/remediation of the device occurs.

NOTE: The device is not added to the HP IPSC if it fails the minimum authentication required for the assessment.

When the device announcement agent is enabled, it announces itself to the HP IPSC server in the following situations:

- Power up

- Cold reset

- When the IP stack comes up (for example, after a network configuration change)

- When the configuration server IP address changes (use this if a DNS entry cannot be used)

- When the agent is enabled using the check box in the HP Embedded Web Server, or the device control panel

- When the **HP Device Announcement Agent** is enabled using the device control panel

When **Accept Device Announcements** is enabled, each device that passes the authentication is assigned a device license from the license pool. If there are insufficient licenses available during an import, the devices are added but not licensed. You can manually issue available licenses later using the **Devices** tab.

Use the following steps to set up **Instant-On Security**:

NOTE: The **Instant-On Security** feature might fail if IPsec, Windows firewall, or other firewalls disallow communication with the HP IPSC using port 3329.

1. If you plan to activate automatic remediation, first request your site administrator to add an entry in your corporate DNS server that points **hp-print-mgmt** to the IP address of your HP Imaging and Printing Security Center server.

2. Create a valid policy by using the following steps:

   a. Start the HP Imaging and Printing Security Center and click the **Policies** tab.

   b. Click the **New** icon in the policy toolbar. The **Create New Policy** window is displayed.

   c. Enter a name for the policy in the **Name** field. (Use a policy name that indicates its purpose, such as "Initial Instant-On Policy.") HP recommends that you select the **HP Best Practices Base Policy** to use as a template, or create your own by selecting **Blank Policy**

   NOTE: You must create a valid initial policy to use with automatic remediation. After you choose a template to use and name your policy, you can modify it to suit your needs.

   The initial policy is **only used** for the assessment of newly announced devices. Subsequent device announcements use the most recently applied policy.

   d. Make any desired changes, and then click **Save** to save the new policy.

   e. Click **Close** to close the policy editor.

3. Click **File**, and then click **Settings**.

4. Click the **Instant-On Security** tab.

5. Select the **Accept Device Announcements** check box.

6. To only accept new device announcements, but disallow automatic remediation, clear the **Allow Automatic Remediation** check box

   When you disallow automatic remediation, the **Automatic Remediation** items are not accessible.

7. To activate automatic remediation, select the **Allow Automatic Remediation** check box. Then select the **Initial Assessment Policy** to use. This policy is used for newly announced devices, and ensures that the device is fully compliant with your requirements.

   NOTE: The selected **Initial Assessment Policy** is used **once** for the initial remediation. After the initial assessment, the HP IPSC uses the most recently applied policy.

8. Select the minimum authentication required for the assessment. The default setting is **No Authentication (Out of the Box)**.

   a. Select the **Mutual Authentication** button for the highest authentication level.

      This authentication method is both the most complicated to set up and also the most secure. It requires certificates be configured both on the device and in the HP IPSC. With this method, the HP IPSC server and the device verify that each other's certificates are valid. When the device announces itself, or other events occur such as an IP address change or cold reset, the device and the HP IPSC server communicate using the secure socket layer to validate certificates before automatic remediation occurs. The certificates must be valid identity certificates signed by a trusted certificate authority, and be installed on the HP IPSC server (see your Microsoft documentation for instructions about setting up server certificates) and each device (see your device documentation for instructions about configuring the certificate). Each device must be set to **require mutual authentication** using certificates during a pre-staging process. Since certificates remain over a cold reset, this method of **Instant-On Security** protects you even if the device is cold reset.

      Once certificates are configured on both the device and the HP IPSC server, click **Select Certificate** and choose the certificate to use for mutual authentication from the list of security certificates found on the HP IPSC server.

   b. Select the **No Authentication (Out of the Box)** button to not use any authentication.

      This is the simplest method, since no pre-staging is required, and devices can literally be taken out of the box, plugged into the network and be automatically configured to be compliant to your security policy by the HP IPSC system. This method also works on devices that are cold reset, since no authentication is required for the auto discovery, assessment, and remediation.

      For slightly more control of the devices accepted into the HP IPSC, you can use no authentication in conjunction with a list of authorized device serial numbers.

      To use the serial number list, select the **Use Device Serial Number List** check box, click **Edit List** to open the **Edit Device Serial Number List** window. Then click **Import** to import a list of serial numbers from a text or XML file, or enter the serial numbers in the **Device Serial Number** field and click **Add**. Click **OK** when you have completed entering serial numbers. The list of serial numbers is used to permit the device into HP IPSC the first time, and then it is automatically removed from the list. All future announcements by that device are recognized by HP IPSC as a valid device.

9. Click **OK** to save your entries.

Once the **HP Device Announcement Agent** and the HP IPSC **Instant-On Security** feature are configured, you will begin to see devices automatically populated and remediated as they are powered on.

Auto discovered devices appear in the **All Devices Group**. From the **Devices** tab, display the **Instant-On Auto Discovered** column to list devices that were auto discovered.

These devices can then be copied into other groups where other polices can be applied. Future Instant-On events (power cycles, cold resets, etc.) will use the most recently applied policy.

3 Use the HP Imaging and Printing Security Center

This section discusses how to add and edit device information, create a policy, assess and remediate, and run reports.

The following topics are included:

- Create a security policy
- Add and edit device information
- Assess and remediate
- Run reports

Create a security policy

After you create a new policy (from the **Policies** tab), intelligent prompts guide you through the process of setting the items. Advice and recommendations are provided as you configure the policy.

A built-in policy is provided (HP Best Practices Base Policy), that you can use as a template for your own policy.

> **NOTE:** Because the HP Best Practices Base Policy includes specific credentials that are vital for a secure policy, the policy you create is initially invalid. You must provide the credentials you want configured on your devices.

The following are selected for remediation and must be provided for a valid policy: **Admin (EWS) Password**, **SNMPv1/v2 Read Community Name** and **Read/Write Community Name**, **SNMPv3 User Name**, **Authorization Passphrase** and **Privacy Passphrase**.

Because the policy editor is self-guided, this section focuses on information about the policy icons, how to include or exclude all items in a policy, and how to use the **Advanced Policy Settings**.

- Create a new policy

- Policy editor icons

- Include or exclude all items

- Set severity, remediation, and unsupported behavior

- Export or import policies

Create a new policy

Before reviewing the features discussed in this section, create a new policy if you have not already done so.

Use the following steps:

1. Start the HP Imaging and Printing Security Center and click the **Policies** tab.

2. To create a new policy, click the **New** icon in the policy toolbar. The **Create New Policy** window is displayed.

3. Enter a name for the policy in the **Name** field, and then select a template to use (**Blank Policy** or **HP Best Practices Base Policy**).

4. Click **OK** to save the new policy.

5. The new policy automatically opens. (To manually open a policy, double-click the policy name, or select the name from the list and click the **Edit** icon in the toolbar.)

6. Select the policy category you want to change.

   Review the associated prompts for information about each item.

NOTE: You can globally include or exclude all items in a specific category or the entire policy by right-clicking the category or subcategory and then selecting the setting. For more information, see Include or exclude all items on page 18.

In addition, you can globally set the advanced remediation options (remediation and unsupported behavior) in a specific category or the entire policy by right-clicking the category or subcategory and then selecting the setting. For more information, see Set severity, remediation, and unsupported behavior on page 18.

Policy editor icons

The following lists the icons used in the policy editor category panel.

Icon	Use
Green check	All of the entries in this category are valid. (The category is complete/valid.)
Yellow caution triangle	There are one or more items that might cause issues on some devices or in certain situations. (The category is complete/valid.)
Red X	Information is missing from the indicated category. (The category is not complete/valid.)
Paper and pencil	Information was changed. However, it has not yet been saved and validated.

The following lists the icons, colors, and text used in the policy editor.

Item	Use
Related technologies (blue hyper-text)	Lists other associated items. Click on the blue text to follow the link. To return to the current item, click the **Back** icon in the **Policies** tool bar.
Green padlock	Security recommendation. This is the recommended setting. Click the icon for more information.
Yellow padlock	Security recommendation. Although this setting provides some security, other choices might provide a more secure policy. Click the icon for more information.
Red padlock	Security recommendation. Provides recommendations for a more secure policy. Click the icon for more information.
Information bubble	Restriction. Provides information about a restriction, such as limited options or a setting that cannot be changed because it depends on another setting. Roll your cursor over the bubble to display the information. Or, click the bubble to display the information in a new window.
X with text box	Required field. Provides information about missing information.
Yellow caution triangle with text box	Provides cautionary information about items that might cause issues on some devices or in certain situations.
Text "(required)" adjoining a field	Required field. Indicates that specific information is missing.
Grayed field	Information cannot be changed.
Select a check box	All settings in this item are applied to the devices associated with this policy.
Clear a check box	None of the settings in this item are applied to the devices associated with this policy.

Include or exclude all items

You can set a policy to include or exclude items. Setting **Include All Items** at the top level creates a valid policy that includes all the recommended settings. Setting **Exclude All Items** at the top level deselects all items in the policy. To set the include or exclude option, use the following steps:

NOTE: You can also include or exclude items at the subcategory level.

1. Start the HP Imaging and Printing Security Center and click the **Policies** tab.

2. Select the policy from the list and click **Edit**.

3. Decide on the highest level in the category tree that you want to set, or select a specific category.

   For example, if you select **Policy Categories** (the highest category level in the tree), all items in all of the subcategories in the policy are set. If you select the **Authentication** category, all items in the **Authentication** category are set.

4. Right-click on the category level or category, and select **Include All Items** or **Exclude All Items** from the menu options.

Set severity, remediation, and unsupported behavior

Remediation options are available for each item in the policy, and can include the severity level to report during an assessment, whether to remediate a failure, and how to report an unsupported feature. You can use the policy's default remediation settings, individually set the options for each item in the policy, or set remediation options to apply to a specific policy category.

NOTE: By default, the advanced **Remediation** and **Unsupported Behavior** settings are displayed. To hide the settings, click **View** and then deselect **Advanced Policy Settings**. The **Severity** setting is always displayed for each policy item.

- **Set Severity** Indicates the security risk of the assessed feature when not in compliance with the policy. Select from **High**, **Medium**, or **Low**.

- **Set Remediation** This advanced option indicates whether the item is remediated during an assessment.

  NOTE: The global remediation setting applies to **all** policies and **takes precedence** over a policy's advanced remediation settings. For example, if global remediation is set to **Disable device remediation (Report Only)**, no device remediation is done regardless of the **Remedation** setting in the policy's **Advanced Policy Settings**. For information about the global remediation setting, see Verify global remediation setting on page 9.

  ◦ **Enable** Out-of-compliance items are changed to match the policy's setting.

  ◦ **Disable** Out-of-compliance items are reported. However, HP IPSC will not change the item on the device. (Use HP Web Jetadmin, the HP Embedded Web Server, or change the **Remediation** setting for the item and rerun the assessment.)

- **Set Unsupported Behavior** This advanced option defines how to report a feature that is not supported by the device during an assessment.

  ◦ **Fail** Reports a failure when the item does not exist on the device.

  ◦ **Ignore (default)** Does not report the item. For example, if a device does not support a fax, you would not want to be notified that a fax PIN is not set.

Set policy options for a single item

To set the severity, remediation, and unsupported behavior options for specific items in a policy:

1. Start the HP Imaging and Printing Security Center and click the **Policies** tab.

2. Select the policy from the policies panel and click the **Edit** icon from the toolbar.

3. Select the category and then select the item that you want to set.

4. Set the **Severity** option by selecting **High**, **Medium**, or **Low**.

5. If the advanced options are not displayed, click **View** and then select **Advanced Policy Settings**.

6. Set the **Remediation** option by selecting **Enable** or **Disable**

7. Set the **Unsupported** option by selecting **Fail** or **Ignore**.

8. To hide the advanced options, click **View** and then deselect **Advanced Policy Settings**.

Set advanced policy options for all items or by category

To set the severity, remediation, and unsupported behavior options for all the items in the policy, or by individual category:

1. Start the HP Imaging and Printing Security Center and click the **Policies** tab.

2. Select the policy and click the **Edit** icon from the toolbar.

3. Decide on the highest level in the category tree that you want to set, or select a specific category.

   For example, if you select **Categories** (the highest category level in the tree), all items in all of the subcategories in the policy are set. If you select the **Authentication** category, all items in the **Authentication** category are set.

4. Right-click on the desired category and select **Set Severity**, or click **Edit** and select **Set Severity**, and then select **High**, **Medium**, or **Low**.

5. Right-click on the category and select **Set Remediation**, or click **Edit** and select **Set Remediation**, and then select **Enable** or **Disable**

6. Right-click on the desired category and select **Set Unsupported Behavior**, or click **Edit** and select **Set Unsupported Behavior**, and then select **Fail** or **Ignore**.

7. To display the advanced options (remediation and unsupported behavior), click **View** and then select **Advanced Policy Settings**. To hide the advanced options, click **View** and then deselect **Advanced Policy Settings**.

Export or import policies

You can export valid policies and then import them to a compatible version of HP IPSC.

Policies are encrypted with a passphrase to protect sensitive data such as passwords and network information. You must provide a passphrase to export or import each policy.

NOTE: You cannot export an invalid (incomplete) policy.

To export a policy:

1. Start the HP IPSC and click the **Policies** tab.

2. Select the policy you want to export, right-click and select **Export Policy**. Or, click **Action** and then click **Export Policy**.

   NOTE: If the **Export Policy** selection is grayed-out, the policy is invalid/incomplete.

3. Enter the passphrase to use for this policy, and then click **OK**. You can use any characters up to a maximum of the dialog box (80 characters).

4. Navigate to the folder where you want to store the policy and click **Save**.

To import a policy:

1. Start the HP IPSC and click the **Policies** tab.

2. Right-click in the policies panel and select **Import Policy**. Or, click **Action** and then click **Import Policy**.

3. Navigate to the folder where the policy is stored, and click **Open**.

4. Enter the passphrase for this policy, and then click **OK**. If the passphrase is incorrect, you cannot import the policy. Otherwise, the policy is imported.

Add and edit device information

You can add devices by manually entering them or by importing a text or XML file that contains a list of devices.

In addition, devices are automatically added if you selected the **Accept Device Announcements** check box in the **Instant-On Security** tab of the **Settings** window (click **File** and then select **Settings**). Devices in this category are noted in the **Auto Discovered** column in the main panel of the **Devices** tab. For information, see Set up Instant-On Security on page 12.

> **NOTE:** Devices are associated with a group, which is simply a collection of devices. Two default groups are available: **All Devices Group** and **Custom Groups**. You can add your own groups to the **Custom Groups**. You cannot change the **All Devices Group**.
>
> HP IPSC licensing occurs automatically when devices are added. For more information, see Install device licensing on page 10.

After import, you can verify support for an individual device or a group of devices. The verification can quickly identify which devices need updates before you run an assessment. Completing the needed corrections before running a full assessment can save time. The verification checks the following:

● Connection status

● Supported HP model

● Credential status

After you run the verification, unsupported devices (printers/MFPs) are noted in the **Supported** column in the main panel of the **Devices** tab. For a list of supported printers/MFPs, see What you must provide on page 5.

For an overview of the icons, menus and panel headings in the **Devices** tab, see Devices tab navigation on page 21.

● Devices tab navigation

● Manually enter device addresses

● Add device addresses using a plain text or XML file

● Edit device and group information

Devices tab navigation

● **Toolbar icons** — Refresh, Properties, Delete, Add to Group, Remove from Group, Disable Filters, Clear Filters, Add Devices, Verify, Assign License

● **Column headings** — Right-click menu (from column area):

  ◦ Hide — Hide the column heading (current pointer location)

  ◦ Columns — Select or deselect the columns to display

  ◦ Enter Filter — Click in the column to filter and enter a value to only display those devices

  ◦ Clear Filter — Click in the filtered column and clear the value

Manually enter device addresses

Use the following steps to manually enter device addresses using the **Add Devices** option:

1. Start the HP Imaging and Printing Security Center and then click the **Devices** tab.

2. If you need to add a group, select **Custom Groups** in the group panel, click the **Action** menu, and then click **New Group**. Or, right-click on the **Custom Groups** and then click **New**. Enter a name for the new group.

3. To manually enter devices, right-click on a group and select **Add Devices**, or click **Add Devices** in the toolbar.

4. Click **Select** to select a group. The default is the **All Devices Group**.

5. Enter the IP address or the host name of the device in the **IP Address or Hostname** field, and click **Add**.

   NOTE: An error is displayed if you enter an unknown IP address or host name.

6. Repeat the previous step for all the addresses you want to associate with the selected group.

   Each address is added to the list of addresses in the **Devices to Add** panel.

7. To remove an IP address/hostname from the **Devices to Add** list, select the address and then click **Remove**. To clear all of the IP addresses/hostnames from the **Devices to Add** list, select **Clear All**.

8. Select the **Resolve IP addresses to hostnames on add** check box to resolve IP addresses to hostnames when the devices are imported.

   NOTE: Selecting this option requires that the DNS entry functions in both directions. Otherwise, the import will fail.

   The only time an IP address is resolved to a host name is during an initial import. To add at a later time, you must delete the device and re-add it.

9. Click **OK** to import the addresses/hostnames listed in the **Devices to Add** panel.

   A message is displayed indicating the number of devices processed, new devices added, duplicates skipped (if any), devices licensed, and devices unlicensed. (if any).

Add device addresses using a plain text or XML file

Use the following steps to create and then read a plain text or XML file that contains device information:

1. Create a text file, or a valid XML file that contains a list of device IP addresses or hostnames using a plain text editor

   Enter one IP address or hostname per line and then press the **Enter** or **Return** key. Save the file so that you can access it with the HP IPSC.

   NOTE: You can use HP Web Jetadmin to create an XML file for import. At a minimum, you must export the device IP address.

2. Start the HP Imaging and Printing Security Center and then click the **Devices** tab.

3. If you need to add a group, select **Custom Groups**, click the **Action** menu, and then click **New Group**. Or, right-click on the **Custom Groups** and then click **New**. Enter a name for the new group.

4. To import the devices, right-click on a group and select **Add Devices**. Or, click **Add Devices** in the toolbar.

5. Click **Select** to select a group from the **Add to Group** field.

6. Click **Add File** to locate the text file to import.

7. Select the file, and then click **Open**.

   If the file is readable, the IP addresses/hostnames are displayed in the **Devices to Add** panel.

8. To remove an IP address/hostname from the list, select the address and then click **Remove**. To remove all of the IP addresses from the list, click **Clear All**.

9. Click **OK** to import the addresses/hostnames listed in the panel.

   A message is displayed indicating the number of devices added.

Edit device and group information

If required, use the HP IPSC **Devices** tab to add, rename, or delete groups, add or remove devices from a group, or to delete devices.

NOTE: Unsupported devices (printers/MFPs) are displayed as **False** in the **Supported** column of the device panel listing. For a list of supported printers/MFPs, see .

If the **Supported** column is not shown, right-click in the column header area, select **Columns** and then select **Supported**.

When you delete a group, any devices associated with that group become members of the **All Devices Group**.

- Add a group

- Rename a group

- Delete a group

- Add or remove a device from a group

- Delete a device

- Assign a license manually

- Set device credentials

Add a group

1. Click the **Devices** tab, click the **Action** menu, and then click **New Group**.

   You can also right-click on the **Custom Groups** in the **Devices** tab, and select **New** from the menu options.

2. Enter a name for the new group.

Rename a group

1. Click the **Devices** tab, select the group name, click the **Action** menu, and then click **Rename Group**.

    You can also right-click the group name and select **Rename** from the menu options.

    NOTE: You cannot rename the **All Devices Group**.

2. Enter the new group name in the group field.

Delete a group

1. Click the **Devices** tab and then select the group name.

2. Click the **Action** menu, and then click **Delete Group**.

    You can also right-click the group name and select **Delete** from the menu options.

    NOTE: You cannot delete the **All Devices Group**.

    Any devices associated with a deleted group become members of the **All Devices Group**.

3. Click **Yes** on the confirmation message to delete the group, or click **No** to cancel.

Add or remove a device from a group

1. To add a device to a different group, click the **Devices** tab.

    a. Select the group that contains the device you are adding to a different group.

    b. Right-click the device from the device list and select **Add to Group** from the menu options.

        Or click the **Add to Group** icon in the device panel toolbar.

    c. Select the group from the **Select a Device Group** window and click **OK** to complete the change.

2. To remove a device from a group, click the **Devices** tab.

    NOTE: When you select **Remove**, the device is removed from the current group, but remains in the **All Devices Group**. Use **Delete** to permanently delete the device from the system.

    a. Select the group that contains the device to remove.

    b. Select the device from the list, right-click and select **Remove from Group** from the menu options, or click the **Remove from Group** icon in the device panel toolbar.

        To remove multiple devices, use CTRL+CLICK or SHIFT+CLICK and then select **Remove from Group**.

    c. An information message displays the number of devices removed.

Delete a device

1. Click the **Devices** tab.

2. Select the group that contains the device to delete, and then select the device from the device list.

    CAUTION: If you confirm the deletion, the device and all of its history are permanently removed from the system.

3. Click the **Action** menu, and then select **Delete Device** from the options.

    You can also right-click the device and select **Delete Device** from the menu options, or select the **Delete** icon from the top of the device panel list.

4. Click **Yes** on the confirmation message to delete the device, or click **No** to cancel.

    If the deleted device was assigned a license, that license is returned to the license pool.

Assign a license manually

You can use the **Devices** tab to manually assign licenses from your license pool to selected devices.

NOTE: Before you can assess and remediate printers/MFPs on your network, you must obtain and install HP IPSC device licenses. A license is required for each printer/MFP that you plan to assess/remediate. Licenses are typically assigned automatically during device addition. However, if there are no available licenses, the device is added unlicensed. For information about installing your license file, see Install device licensing on page 10.

Use the following steps to assign licenses:

1. Click the **Devices** tab.

2. Select either the individual device or the group that contains the device(s) to license, and then select the device from the device list.

    NOTE: Once a license is assigned to a device, the license cannot be returned to the license pool until the device is deleted.

3. Click **License** from the toolbar, or right-click and select **License** from the menu options.

Set device credentials

Use the **Set Credentials** option to set device credentials for the devices you plan to assess/remediate. You can set SNMP (v1/v2 or v3) credentials and set passwords for the HP Embedded Web Server password and the file system. Once set, you can assess/remediate across a range of devices without having to reset credentials or passwords for individual devices or groups of devices.

Use the following steps to set SNMP v1/v2 or v3 credentials:

1. To set credentials for a group of devices, select the group.

2. To set credentials for an individual device, select the group that contains the device, and then select the device from the device list.

3. Right-click and select **Set Credentials**, and then select **User Configured** from the menu options.

4. Select the **Set SNMP Credentials** check box to set the SNMP credentials.

5. To set the SNMP v1/v2 read community name, click the **Read Community Name** button, and enter the name on the device or group of devices, then reenter to confirm.

6. To set the SNMP v1/v2 read/write community name, click the **Read/Write Community Name** button, and enter the name on the device or group of devices, then reenter to confirm.

7. To set the SNMP v3 credentials, click the **SNMP v3 Credentials** button, and then enter the following information for the device or group of devices:

   a. Enter the **User Name**.

   b. Enter the **Authentication Passphrase** and then reenter it to confirm.

   c. Select the **Authentication Protocol** (MD5 or SHA).

   d. Enter the **Privacy Passphrase** and then reenter it to confirm.

   > **NOTE:** If the device requires key credentials, HP IPSC automatically converts the passphrase.

   e. Select the **Privacy Protocol** (DES or AES).

8. Select the **Set Admin (EWS) Password** check box to set the HP Embedded Web Server password. Enter the password and then reenter it to confirm.

9. Select the **Set File System Password** check box to set the file system password on the device. Enter the password and then reenter it to confirm.

10. Click **OK** to save your entries or **Cancel** to discard them.

Assess and remediate

After you add devices and create policies, you are ready to run an assessment of the devices within the selected device group. You can schedule the assessment to run immediately or to run in the future. The assessment identifies the devices in your network that do not comply with your security policy. If you choose to remediate, devices with noncompliant settings are corrected.

NOTE: If **Allow Automatic Remediation** is enabled, automatic remediation of the device occurs automatically. For more information, see Set up Instant-On Security on page 12

Before running the first assessment, verify the global remediation setting. See Verify global remediation setting on page 9.

Some policy items cannot be remediated. The item might be dependent on another setting or it cannot be changed on the device. See the item's information bubble for details about the restriction.

Remediation options are also set by the policy using the **Advanced Policy Settings**. See Set severity, remediation, and unsupported behavior on page 18 for more information.

When scheduling an assessment, you can select to **Assess Only**, which provides a report, but does not change any device settings, or **Assess and Remediate**, which remediates out-of-compliance devices.

Schedule an assessment/remediation

You can run an assessment/remediation from the **Devices** tab, the **Policies** tab, or from the **Tasks** tab.

- Run an assessment/remediation from the Devices tab
- Run an assessment/remediation from the Policies tab
- Run an assessment/remediation from the Tasks tab

Run an assessment/remediation from the Devices tab

To run an assessment from the **Devices** tab:

1. Start the HP Imaging and Printing Security Center and click the **Devices** tab.

2. Right-click the device group and select **Assess Only** or **Assess and Remediate**. Or, click **Action** and then select **Assess Only** or **Assess and Remediate** from the menu.

3. Enter a **Task Name** for the assessment so you can identify it later.

4. Select the **Policy** to use for the assessment.

   NOTE: You cannot select an invalid (incomplete) policy for an assessment.

5. Click **Select** in the **Device Group** field to change the group.

6. Enter the **Start Date**, **Start Time**, and **Frequency**, or use the defaults.

7. Click **OK** to schedule the assessment or **Cancel** to discard your entries.

8. Click the **Tasks** tab to monitor your task. (Click the **Refresh** button to update the display.)

Run an assessment/remediation from the Policies tab

To run an assessment from the **Policies** tab:

1. Start the HP Imaging and Printing Security Center and click the **Policies** tab.

2. Right-click on the policy you want to use and select **Assess Only**, or **Assess and Remediate** from the menu. Or, select the policy and click **Action** and select **Assess Only**, or **Assess and Remediate** from the menu.

3. Enter a **Task Name** for the assessment so you can identify it later.

4. Verify the **Policy** to use for the assessment or select a different policy.

5. Click **Select** in the **Device Group** field and select the group.

6. Enter the **Start Date**, **Start Time**, and **Frequency**, or use the defaults.

7. Click **OK** to schedule the assessment or **Cancel** to discard your entries.

8. Click the **Tasks** tab to monitor your task. (Click the **Refresh** button to update the display.)

Run an assessment/remediation from the Tasks tab

To run an assessment from the **Tasks** tab:

1. Start the HP Imaging and Printing Security Center and click the **Tasks** tab.

2. Click the **Assess Only**, or the **Assess and Remediate** button.

3. Enter a **Task Name** for the assessment so you can identify it later.

4. Verify the **Policy** to use for the assessment or select a different policy.

5. Click **Select** in the **Device Group** field and select the group.

6. Enter the **Start Date**, **Start Time**, and **Frequency**, or use the defaults.

7. Click **OK** to schedule the assessment or **Cancel** to discard your entries.

8. Click the **Refresh** button to update the display.

View assessment results

You can view the results of an assessment from the **Devices** tab or from the **Reports** tab.

- View results from the Devices tab
- View results from the Reports tab

View results from the Devices tab

To view results from the **Devices** tab, use the following steps:

1. Start the HP Imaging and Printing Security Center and click the **Devices** tab.

2. Select the device group.

3. Right-click on the device in the list and select **Recommendations**, which displays the policy item, recommended value, and the policy name.

View results from the Reports tab

To view results from the **Reports** tab, use the following steps:

1. Start the HP Imaging and Printing Security Center and click the **Reports** tab.

2. To view overall device status, select the **Devices Assessed** report.

3. To view items that failed and the recommendation, select the **Fleet Recommendations Summary** report.

Run reports

Before running reports, you can select to filter the results using the device group. To do this, select **Reports**, **Executive Summary**, or **Devices View**, or **Policy Item View** and then choose the device group from the **Reports** toolbar. The filters apply to any report that consists of device information.

Select from the following report categories.

● Executive Summary

● Devices View

● Policy Item View

NOTE: Use the **Reports** tab toolbar to control the print and page layout, the reporting time span (for the **Remediated** report), and to optionally select the group. You can also export the report to an Adobe PDF or Microsoft Word format file.

Executive Summary

Use the executive summary to report the current state of your system. The **Executive Summary** provides assessment risk by device, devices unassessed, assessment risk by policy item, assessment risk by feature category, and the risk summary. (The report is filtered by the currently selected device group.)

Devices View

Select from the following reports. (These reports are filtered by the currently selected device group.)

● **Assessed**

   Lists all of the assessed devices. You can generate a more detailed report by selecting individual devices.

● **Recommendations**

   Lists all devices that have at least one recommendation sorted by the number of recommendations. You can generate a more detailed report by selecting individual devices.

● **Remediated**

   Lists all of the remediated devices. You can generate a more detailed report by selecting individual devices.

● **Unassessed**

   Lists all of the devices that could not be assessed.

Policy Item View

Select from the following reports.

- **Fleet Assessment Summary**

  Summarizes the number of recommendations for a policy item and its risk in a security category. Filtered by the currently selected device group.

- **Policies**

  Lists all of the current policies. You can generate additional reports by item name or all items.

A Network port assignments

This section lists the ports used by the HP IPSC.

Table A-1 Ports used from the HP Imaging and Printing Security Center service to the printer/MFP device

Service	Port	IP Protocol	Notes
HTTP	80 and 8080	TCP	Used only when SSL is not supported on the device
HTTPS	443 and 8080	TCP	HTTP Web over SSL
PING	N/A	ICMP	Echo ping
SNMP	161	UDP	Simple Network Management Protocol

Table A-2 Port used from the user interface to the HP Imaging and Printing Security Center service

Service	Port	IP Protocol	Notes
WCF NET.TCP	8002	TCP	WCF with message encryption

Table A-3 Port used from the HP Imaging and Printing Security Center service to the database

Service	Port	IP Protocol	Notes
MS SQL	1433	TCP	

Table A-4 Port used from the device to the HP Imaging and Printing Security Center service

Service	Port	IP Protocol	Notes
HP Instant-On Security or hp-device-disc (IANA name)	3329	TCP	Uses SSL

Table A-5 Local port used by the HP Imaging and Printing Security Center service and the HP Print License Service

Service	Port	IP Protocol	Notes
HP Print License Service	8888	TCP	

B   Legal statements

This section contains the legal statements.

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For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

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c. Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d. If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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